

REMARKS

This amendment is responsive to the final office action (Final Action) dated November 10, 2010. Claims 6 and 11 have been amended. No new matter was added by the amendments. Claim 6 was amended to correct a typographical error. The amendment to claim 11 is discussed further below. A Request for Continued Examination is filed concurrently herewith.

In the Final Action, the Examiner rejected all the pending claims as being obvious under 35 U.S.C. §103(a) over the combination of "A Study of the Noise From Diesel Engines Using Independent Component Analysis" by Li et al ("Li") in view of U.S. Patent 6,167,984 to Johansson ("Johansson") and further in view of U.S. Patent 6,454,047 to Galaitsis ("Galaitsis"). (Final Action at 3.) The Examiner further objected to claim 11 for being indefinite under 35 U.S.C. §112. *Id.*

Applicants respectfully disagree with the prior art rejections. Therefore, the rejected claims are again presented for the Examiner's consideration. Applicants respectfully request that the Examiner reconsider the rejections in view of the foregoing amendments and following remarks.

Claim Rejections - 35 U.S.C. §112

Claim 11 has been amended to clarify how the different features recited in the claim are modeled. Accordingly, all features preceded by the word "model" are now preceded by "computer-modeled." Applicants respectfully submit that amended claim 11 complies with §112. As such, Applicants respectfully request withdrawal of the §112 rejection.

Claim Rejections - 35 U.S.C. §103(a)

Claim 1 is directed to a method for supplying a system for sound attenuation of noise relating to an exhaust system of exhaust gases from a high power combustion engine, the method includes at least the following:

adding to a model of the exhaust system, by means of a computing device, a plurality of elements where each element comprises a first reactive part, a resistive part and a second reactive part;

inserting into the model, by means of the computing device, at least one single attenuating device;

calculating, by means of the computing device, an attenuating effect of the elements and an attenuating effect of the at least one single attenuating device relating to a sound pressure level of the high power combustion engine;

repeating the inserting and calculating step, until the sound pressure level of the high power combustion engine is attenuated below a predetermined level;

assembling, based on the adding, inserting, calculating, and repeating steps, the system for sound attenuation, where the system comprises a plurality of elements and at least one single attenuating device mounted as channel parts along the exhaust system, and wherein a measured noise level at the close vicinity of an outlet is below the predetermined noise level.

In rejecting claim 1, the Examiner asserts that the "simulated source signals" disclosed in *Li* teach the "computing device" of claim 1. (Final Action at 3.) Applicants respectfully submit, however, that the "simulated source

signals" of *Li* do not teach the computing device of Applicants' invention. In particular, *Li* makes it clear that the "simulated source signals" are "acoustic signals generated from a test diesel engine using the ICA in an effort to identify its noise sources." (see *Li* p. 1166 ll. 26-27). Applicants respectfully submit that the source signals do not necessitate a computing device, because *Li* explicitly teaches that the source signals represent signals from a test diesel engine. In fact, the section cited by the Examiner is merely a numerical example "[t]o prove the validity of the proposed ICA method." (see *Li* p. 1172 ll. 19-20). *Li* does not teach how to supply a system for sound attenuation as disclosed in Applicants' invention.

Moreover, *Li* discloses a simple circuit that simulates the test engine. (see *Li* p. 1167, Fig 1(b)). The simple circuit disclosed in *Li*, which merely discloses a resistor, a conductor, and an inductor, is not a computing device. Each element of Applicants' invention is simulated via "software objects" that would not have been obvious to one of ordinary skill in the art from the simple circuit disclosed in *Li*. (see Applicants' disclosure at p. 13, ll. 1-2).

The Examiner further relies on certain paragraphs of *Li* to allege that it teaches "calculating, by means of the computing device, an attenuating effect of the elements and an attenuating effect of the at least one single attenuating device relating to a sound pressure level of the high power combustion engine." (Final Action at 4.) Applicants respectfully submit that the paragraphs cited by the Examiner do not teach the aforementioned calculating step of claim 1. Instead *Li* discloses the types of simulated source signals used to demonstrate how the independent component analyzes works. *Li* merely demonstrates how acoustic signals are measured from the test engine under different speed and load conditions. (see *Li* p. 1175, ll. 26-28.) *Li* compares

the normalized kurtosis of generated Gaussian distributions to the normalized kurtosis of the measured acoustic signals. (see *Li* p. 1175, ll. 23-28.) The point of this comparison is to confirm that the source signals are non-Gaussian so that the independent component analyzes can be applied, since it cannot be applied to Gaussian distributed signals. (see *Li* p. 1175, ll. 1-4 and Figs. 6(a)-(b).) Thus, Applicants respectfully submit that one of ordinary skill in the art could not have conceived calculating, by means of the computing device, an attenuating effect of the elements and an attenuating effect of the at least one single attenuating device relating to a sound pressure level of the high power combustion engine, from the paragraph relied on by the Examiner.

As such, it is clear that *Li* does not make up for the deficiencies in *Johansson* and *Galaitsis*. Accordingly, even when combined with *Johansson* and *Galaitsis*, *Li* does not teach or suggest the features of Applicants' invention. Thus, it would not have been obvious to one of ordinary skill in the art to combine *Li* with the teachings of *Johansson* and *Galaitsis*.

For at least the reasons recited herein, Applicants respectfully request withdrawal of the rejection. Applicants submit that the independent claim 1 is in condition for allowance as it claims novel and non-obvious subject matter.

Moreover, aspects of dependent claims 2-7 and independent claim 11 may be compared with claim 1. For at least the reasons previously stated, Applicants submit that all the pending claims are in condition for allowance. Thus, Applicants request that the Examiner allow all the dependent claims and independent claim 11 which, in addition to the reasons set forth above, also include novel and non-obvious subject matter.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095.

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Respectfully submitted,
Electronic signature: /Roosevelt
V. Segarra/
Roosevelt V. Segarra
Registration No.: 60,730
LERNER, DAVID, LITTENBERG,
KRUMHOLZ & MENTLIK, LLP
600 South Avenue West
Westfield, New Jersey 07090
(908) 654-5000
Attorney for Applicant